



Attorney Docket No. 31181.27  
Customer No. 000027683

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:  
Cole

Serial No. 10/028,325

Filed: December 21, 2001

For: Femoral Intramedullary Rod System

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Group Art Unit: 3732

Confirmation No.: 6083

Examiner: Priddy, Michael B.

**AMENDMENT**

Mail Stop Amendment  
Commissioner of Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

**I. Introductory Comments**

The present paper is submitted in response to the Office Action mailed May 25, 2004.

No extension of time is believed to be necessary. If, however, an additional extension of time is required, the extension is requested, and I authorize the Commissioner to charge any fees for this extension, or any deficiency in fees, to Haynes and Boone, LLP, Deposit Account No. 08-1394.

**Amendments to the Claims** are reflected in a listing of claims which begin on page 2 of this paper.

**Remarks/Arguments** begin on page 8 of this paper.

## II. Amendments to the Claims

The text of all pending claims and the status of each claim is identified below:

1. (Cancelled) A bone fixation apparatus, comprising: an intermedullary nail having a longitudinal axis and a proximal tip; a blade having a second longitudinal axis, said blade defining a recess extending in substantial parallel alignment with said second longitudinal axis, said recess configured to receive said proximal tip; and locking member to interconnect said tip and said blade.
2. (Cancelled) The apparatus of claim 1, wherein said recess is at least partially enclosed.
3. (Cancelled) The apparatus of claim 2, wherein said recess is enclosed on three sides and open on a forth side.
4. (Cancelled) The apparatus of claim 3, wherein said recess extends along the second longitudinal axis over at least half of the length of the blade.
5. (Cancelled) The apparatus of claim 1, wherein said blade further includes an aperture in communication with said recess, said aperture adapted to received a fastening member configured for engagement with said tip.
6. (Cancelled) The apparatus of claim 5, wherein said aperture is a slot.
7. (Cancelled) A method of stabilizing long bone fractures, comprising: providing an elongate fixation member and a transverse stabilizer having a recess for receiving at least a portion of the elongate fixation member; obtaining access to the intermedullary canal of a long bone; positioning the elongate fixation member in the intermedullary canal; aligning the recess of the transverse stabilizer with the tip of the elongate fixation member; driving the transverse stabilizer in a direction substantially transverse to the longitudinal axis of the elongate fixation member to thereby position at least a portion of the elongate fixation member within the recess of the transverse stabilizer; and interconnecting the elongate fixation member and the transverse stabilizer.

8. (Cancelled) The method of claim 7, wherein said driving includes impacting a portion of the transverse stabilizer.

9. (Cancelled) The method of claim 8, wherein said driving results in sliding engagement between the recess and the elongate member.

10. (Cancelled) A reaming head, comprising:

a body having a longitudinal axis and an outer surface defining a longitudinally extending substantially cylindrical configuration extending over a majority of the circumference of said outer surface and a truncated surface interrupting said substantially cylindrical configuration;

a cutting element positioned in said truncated surface;

a transverse axis, transverse to the longitudinal axis, the transverse axis intercepting at least a portion of the substantially cylindrical configuration, and intercepting at least a portion of the cutting element.

11. (Amended) A reaming head, comprising:

a body having a longitudinal axis and an outer surface defining a longitudinally extending substantially cylindrical configuration extending over a majority of the circumference of said outer surface and a truncated surface interrupting said substantially cylindrical configuration;

a cutting element positioned in said truncated surface;

a transverse axis, transverse to the longitudinal axis, the transverse axis intercepting at least a portion of the substantially cylindrical configuration, and intercepting at least a portion of the cutting element;

wherein said cutting element is a blade spaced from said outer surface and extending in substantial alignment with said longitudinal axis.

12. (Previously Presented) The reaming head of claim 11, further including a rounded leading surface adjacent said cylindrical configuration.

13. (Original) A method of eccentric reaming, comprising: providing a reaming head having an outer surface with a cylindrical portion and a cutting element positioned opposite said cylindrical portion and configured for cutting upon oscillatory motion; inserting the reaming head into a bone opening; positioning said cylindrical portion adjacent tissue to be preserved; positioning

the cutting surface adjacent tissue to be removed; oscillating the head of the reamer to cause the cutting surface to remove tissue.

14. (Original) The method of claim 13, wherein said oscillating occurs over a range of 20 to 180 degrees.

15. (Original) The method of claim 14, wherein said oscillating occurs over a range of 80 to 120 degrees.

16. (Original) The method of claim 13, wherein said inserting further includes positioning a wire guide into the tissue and positioning the reamer over the wire guide prior to said inserting.

17. (Amended) A reaming head, comprising:

a body having a longitudinal axis and an outer surface defining a longitudinally extending substantially cylindrical configuration extending over a majority of the circumference of said outer surface and a truncated surface interrupting said substantially cylindrical configuration;

a cutting element positioned in said truncated surface and spaced from said outer surface;

a transverse axis, transverse to the longitudinal axis, the transverse axis intercepting at least a portion of the substantially cylindrical configuration, and intercepting at least a portion of the cutting element;

wherein said longitudinally extending substantially cylindrical configuration extends over an arc of at least 240° of the circumference of said outer surface.

18. (Previously Presented) The reaming head of claim 11, wherein said longitudinally extending substantially cylindrical configuration is substantially uninterrupted.

19. (Previously Presented) The reaming head of claim 11, wherein said longitudinally extending substantially cylindrical configuration consists essentially of a single longitudinally extending substantially cylindrical configuration.

20. (Previously Presented) The reaming head of claim 11, wherein said cutting element consists essentially of a single cutting element.

21. (Previously Presented) The reaming head of claim 11, further comprising a guide wire lumen.

22. (Cancelled) A reaming head, comprising:

- a body having a longitudinal axis and a perpendicular axis perpendicular to the longitudinal axis;
- an outer surface disposed on a first side of the body,
- a truncated surface disposed on a second side of the body;
- a cutting element positioned in said truncated surface;
- a first end of the perpendicular axis intercepting at least a portion of the outer surface, and a second end of the perpendicular axis intercepting at least a portion of the truncated surface.

23. (Amended) A reaming head, comprising:

- a body having a longitudinal axis and a perpendicular axis perpendicular to the longitudinal axis;
- an outer surface disposed on a first side of the body,
- a truncated surface disposed on a second side of the body;
- a cutting element positioned in said truncated surface and spaced from said outer surface;
- a first end of the perpendicular axis intercepting at least a portion of the outer surface, and a second end of the perpendicular axis intercepting at least a portion of the truncated surface;
- wherein said cutting element comprises a blade extending in substantial alignment with said longitudinal axis.

24. (Previously Presented) The reaming head of claim 23, further including a rounded leading surface adjacent said outer surface.

25. (Previously Presented) The reaming head of claim 23, wherein said outer surface extends over an arc of at least a majority of a circumference of said body.

26. (Amended) A reaming head, comprising:
- a body having a longitudinal axis and a perpendicular axis perpendicular to the longitudinal axis;
  - an outer surface disposed on a first side of the body,
  - a truncated surface disposed on a second side of the body;
  - a cutting element positioned in said truncated surface and spaced from said outer surface;
  - a first end of the perpendicular axis intercepting at least a portion of the outer surface, and a second end of the perpendicular axis intercepting at least a portion of the truncated surface;
  - wherein said outer surface extends over an arc of at least 240° of a circumference of said body.
27. (Previously Presented) The reaming head of claim 23, wherein said outer surface is substantially uninterrupted.
28. (Previously Presented) The reaming head of claim 23, wherein said cutting element consists essentially of a single cutting element.
29. (Previously Presented) The reaming head of claim 23, further comprising a guide wire lumen.
30. (Previously Presented) The reaming head of claim 17, further including a rounded leading surface adjacent said cylindrical configuration.
31. (Previously Presented) The reaming head of claim 17, wherein said longitudinally extending substantially cylindrical configuration is substantially uninterrupted.
32. (Previously Presented) The reaming head of claim 17, wherein said longitudinally extending substantially cylindrical configuration consists essentially of a single longitudinally extending substantially cylindrical configuration.
33. (Previously Presented) The reaming head of claim 17, wherein said cutting element consists essentially of a single cutting element.

34. (Previously Presented) The reaming head of claim 17, further comprising a guide wire lumen.
35. (Previously Presented) The reaming head of claim 26, further including a rounded leading surface adjacent said outer surface.
36. (Previously Presented) The reaming head of claim 26, wherein said outer surface extends over an arc of at least a majority of a circumference of said body.
37. (Previously Presented) The reaming head of claim 26, wherein said outer surface is substantially uninterrupted.
38. (Previously Presented) The reaming head of claim 26, wherein said cutting element consists essentially of a single cutting element.
39. (Previously Presented) The reaming head of claim 26, further comprising a guide wire lumen.

#### IV. Remarks

##### A. Status of the Application

Applicants appreciate and acknowledge the allowability of claims 13-16.

No claims have been canceled, claims 11, 17, 23 and 26 have been amended, and no claims have been added. Accordingly, the pending claims are 11-21 and 23-39.

Reconsideration of this application in light of the following remarks is respectfully requested.

##### B. Rejection under 102(e) over U.S. 6,663,628 to Peters

Claims 11, 12, 18-21, 23-29, and 38 are rejected under 35 U.S.C. §102(e) over U.S. Patent No. 6,663,628 to Peters ("Peters"). Applicants respectfully traverse the rejection.

Peters teaches a blade 10 having an outer blade assembly 12 with an outer tube 16. At the distal section 30 of the outer tube 16, there is a dielectric coating 38 and a cutting surface 36. Cutting surface 36 is provided about the periphery of cutting window 34. (Figures 1-3, and column 4, line 19-column 5, line 20.) " ... whereas the distal section 34 is a cutting surface or edge 36 about at least a portion of the cutting window 34." (Peters, column 4, lines 48-50, emphasis added).

Independent claim 11 recites, "a truncated surface interrupting said substantially cylindrical configuration; a cutting element positioned in said truncated surface; a transverse axis, transverse to the longitudinal axis, the transverse axis intercepting at least a portion of the substantially cylindrical configuration, and intercepting at least a portion of the cutting element; wherein said cutting element is a blade spaced from said outer surface and extending in substantial alignment with said longitudinal axis."

Independent claim 23 recites, "a truncated surface disposed on a second side of the body; a cutting element positioned in said truncated surface and spaced from said outer surface; a first end of the perpendicular axis intercepting at least a portion of the outer surface, and a second end of the perpendicular axis intercepting at least a portion of the truncated surface; wherein said cutting element comprises a blade extending in substantial alignment with said longitudinal axis."

Independent claim 26 recites, "a truncated surface disposed on a second side of the body; a cutting element positioned in said truncated surface and spaced from said outer surface; a first end of the perpendicular axis intercepting at least a portion of the outer surface,



and a second end of the perpendicular axis intercepting at least a portion of the truncated surface; wherein said outer surface extends over an arc of at least 240° of a circumference of said body."

Applicant respectfully submits that Peters does not teach or suggest the desirability of "a cutting element positioned in said truncated surface and spaced from said outer surface" as recited in independent claims 11, 23, and 26. As discussed above, Peters teaches a cutting blade formed by the edge of the outer surface adjacent the cutting window, not a separate blade positioned inside the opening of the cutting window.

Regarding claims 11 and 23, Peters also does not teach or suggest, "wherein said cutting element comprises a blade extending in substantial alignment with said longitudinal axis." Peters' cutting window 34 has portions in alignment with and portions transverse to a longitudinal axis of outer tube 16, and therefore cutting surface 36 about cutting window 34 also has portions in alignment with and transverse to a longitudinal axis of outer tube 16.

Regarding claim 26, Peters does not teach or suggest, "wherein said outer surface extends over an arc of at least 240° of a circumference of said body."

Applicant respectfully requests that the Examiner withdraw the rejection to claims 11, 12, 18-21, 23-29, and 38, for at least the reasons set forth above.

#### C. Rejection under 103(a) over U.S. 6,663,628 to Peters

Claims 17, 30-32, 34, 26, 35-37 and 39 are rejected under 35 U.S.C. §103(a) over U.S. Patent No. 6,663,628 to Peters ("Peters"). Applicants respectfully traverse the rejection.

Claims 17, 30-32, 34, 26, 35-37 and 39 recite "a cutting element positioned in said truncated surface and spaced from said outer surface."

Applicant respectfully submits that Peters does not teach or suggest the desirability of "a cutting element positioned in said truncated surface" as recited in claims 17, 30-32, 34, 26, 35-37 and 39. As discussed above, Peters teaches a cutting element at the edge of the outer surface adjacent the cutting window, not positioned in the cutting window. In addition, Peters does not teach or suggest, "wherein said outer surface extends over an arc of at least 240° of a circumference of said body."

Applicant respectfully requests that the Examiner withdraw the rejection to claims 17, 30-32, 34, 26, 35-37 and 39, for at least the reasons set forth above.

D. Allowable Subject Matter

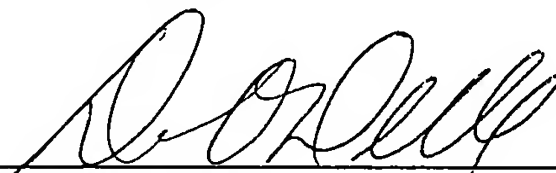
In the Office Action, the Examiner allowed claims 13-16. Applicant appreciates the allowance of claims 13-16.

E. Conclusion

In view of the foregoing, Applicant respectfully submits that all pending claims are allowable, and respectfully requests a notice of allowance for claims 11-21 and 23-39. If the Examiner believes an interview would be helpful in moving the application forward to allowance, or has any questions, the Examiner is invited to call the undersigned at the telephone number listed below.

Respectfully submitted,

Date: 8-24-04



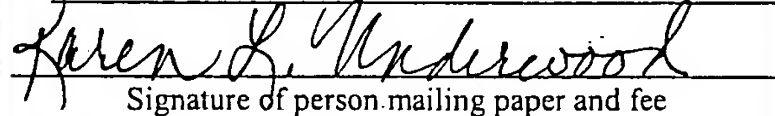
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on

8-24-04

  
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